ADMINISTRATIVE
INTERNAL USE ONLY

OC-M-75-373
12 June 1975

MEMORANDUM FOR: Chief, Services Staff, DDO
Director, Central Reference Service, DDI
Director of Joint Computer Support, DDA

SUBJECT : CDS-OJCS Interface Specification

REFERENCE : OC-M-74-299, dtd 4 June 1974, Subject: CDS Interface Coordination Group

1. The CDS Interface Coordination Group, established by the referent memorandum, has prepared the attached CDS-OJCS Interface Specification for your approval. This specification describes the manner in which the Office of Communications' Cable Dissemination System will link the Agency's telecommunications network with information processing systems such as Project SAFE.

2. The present schedule anticipates activation of the Cable Dissemination System in June 1976, at which time the CDS-OJCS link will become operational. In the meantime, OJCS should develop a monitor program for its system to permit testing and support of the interface beginning in early 1976.

3. Your response to this memorandum is requested by 27 June 1975. Should additional information be required, members of your staff may contact [redacted] on STAT
STAT extension [redacted]

[redacted] STAT
Director of Communications

Attachment: CDS-OJCS Interface Specification

ADMINISTRATIVE
INTERNAL USE ONLY

SUBJECT: CDS-OJCS Interface Specification

Distribution:
1 - C/DDO/SS, w/att
1 - D/CRS, w/att
1 - D/OJCS, w/att
1 - OC Record Copy, w/o att
1 - OC-O/DO, w/att
1 - OC-E Chrono, w/o att
1 - OC-E/SED/SYB Chrono, w/o att

AUTH: _____ _____
C/OC-E Date

COORD: _____ _____
C/OC-O/DO Date

STAT OC-E/SED/SYB/CSS [ ] (6 June 1975)

CDS-OJCS Interface Specification

Objective:

The Cable Dissemination System (CDS) will link the Agency's telecommunications and ADP activities to permit further processing of messages. Initially, CDS will interface electrically with an OJCS system which will apply incoming messages to user programs dedicated to analyst support, file building, indexing, extracting and other information processing functions. Specifically, the interface will allow messages and descriptive data to be sent from CDS to OJCS once, store them once in OJCS, and provide individual applications systems with pointers to the information intended for them. In addition, provision will be made for a future capability for applications systems to originate messages and transfer them to CDS for transmission to the addressee.

Two levels of interface protocols are required for the CDS-OJCS interface: a communications line protocol and a message protocol. The communications control procedure will utilize the HASP multi-leaving discipline and will be a 9600 bps synchronous full-duplex circuit operating in half-duplex. CDS will appear as a Remote Job Entry (RJE) terminal

to OJCS. CDS will transmit a group of messages every 10 minutes. Each of these "jobs" will be preceded and followed by standard job control language. The CDS to OJCS message protocol must include the following elements:

A. Message heading for OJCS circuit.

B. Message text including dissemination and internal header.

C. Message ending for OJCS circuit.

Interface Specification

1. Data Communication Control Procedures

The procedure to be used on the circuit between CDS and the OJCS system will be HASP multi-leaving. This procedure is described in DATEX Program Design Note #4. One data stream will be used for the exchange of information messages and the punch stream will be used for the exchange of supervisory messages. The circuit will operate at 9600 bps. CDS will sign on and off of the OJCS system under operator control through the use of the "OPEN CIRCUIT" and "CLOSE CIRCUIT" commands in CDS. After CDS has signed on, a job will be sent to OJCS every 10 minutes. The job will contain all messages which have accumulated in the OJCS circuit queue during the previous 10 minute interval. If no traffic is awaiting transmission to OJCS at the end of an interval, the transmission will be delayed by 10 minute increments until at least one message has entered the OJCS circuit queue. If the length

of a transmission exceeds 10 minutes (such as after recovery from a CDS or OJCS system failure), then the subsequent transmission will occur 10 minutes after completion of the current one. In the event that CDS, the OJCS system, or the circuit between the two systems fails during the transmission of a job, CDS will commence at the beginning of the interrupted transmission upon restoration of service.

Each job will be preceded and followed by a standard job control statement.

2. CDS-OJCS Message Protocol and Format

Transmissions between CDS and OJCS may contain a variable number of messages. Each message will contain three components - the OJCS message header, the message text, and the OJCS message ender. A summary description of these components follows:

A. OJCS Message Header

This header will be generated by CDS for messages being transmitted to OJCS and will contain the following elements:

(1) CDS Output Sequence Number (5 digits)

(2) Originator Identification

(3) Message Reference Number and Station Serial Number

(4) Originator Date-Time-Group

(5) Message Category

(6) Classification

(7) Precedence

(8) CDS Number

(9) User Program Identifiers (SAFE, STRES, etc.)

B. Message Text

The message text will be nearly identical in format to that used in output to the CDS line printer. The dissemination precedes the text of the cable.

C. OJCS Message Ender

An "end of message" sequence will occur after each message. This sequence shall include the CDS Output Sequence Number which was used in the message header. The format of the header, text and ender are defined more rigorously in CDS project Coordination Note #6.

3. OJCS-CDS Message Protocol and Format

Each message transmitted from the OJCS system to CDS will be treated as a separate transaction. A line transmission control number (0001-9999) will be assigned by the OJCS system and will precede the message data. The message text will be prepared in originating format (similar to that used presently on the Optical Character Reader forms).

4. OJCS System Requirements

The OJCS system will interface with a Collins 7422H-1 Communications Link Control Module using MIL-STD-188(C) signaling. All data exchanged between CDS and OJCS will be EBCDIC code; both upper and lower case characters may be used. The OJCS system should be designed to accept 6,000

messages per day, where the average length of a message is approximately 2,000 characters.

The OJCS system will be responsible for accepting messages from CDS, writing them to storage and distributing pointers to these messages to the appropriate applications programs. It is desirable to store each message only once in OJCS, regardless of the number of applications programs a given message is addressed to. OJCS is responsible for implementing the necessary safeguards to insure that no message can be accessed by an application program which was not addressed by that message. In the event that OJCS requires retransmission of a message or group of messages from CDS, a telephonic request is necessary; messages cannot be retrieved from CDS by OJCS through the interface.